Department of Education and Early Childhood Development

Skills & Training Needs 2013

Victorian Information, Media and Telecommunications Industry

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Introduction

In the context of Victoria's complex and dynamic economy, a demand-led approach is the best way to ensure a responsive and dynamic vocational training system that will help as many people as possible build skills that lead to better jobs. This is most evident in the results of the market approach embodied in the Victorian Training Guarantee, which has achieved positive outcomes for both students and the economy.

The Refocusing Vocational Training (RVT) in Victoria reforms are designed to satisfy important criteria for a strong vocational training market. Through these reforms the Government will be able to more effectively manage the training market, ensuring that the vocational training system continues to produce positive outcomes for students, businesses and Victoria.

Through the RVT, there is a role for government in monitoring, providing information and responding to the performance of the vocational training system. A key mechanism by which the government exercises this role is through the Industry Participation Model (IPM). The IPM is based on a new partnership approach between government, industry and training providers. It increases industry influence within the training market by supporting more direct relationships between industry and training providers and by increasing direct consultation with government.

An aim of the IPM is to seek to improve information sharing about training provision, options, outcomes, gaps and associated barriers between industry, training providers and employers to improve responsiveness. A suite of information products and tools are been developed, of which this report is one, to support this aim and an overview of these are provided in the table following.

This report is describes training and economic activity and developments related to Victoria's Information, Media and Telecommunications Industry, bringing together a range of qualitative and quantitative insights from desk research and industry engagement. It highlights both the challenges the industry faces in attracting the right skills, and the opportunities businesses, training providers and government have to address these challenges. Key metrics used in this report include enrolments by sub-industry, qualification level, occupation, courses, age group, gender, learners facing barriers, provider type, reason for study and completions by related industry sub-sectors. The report also covers apprentices and trainees, and an analysis of the responsiveness of training delivery to specific occupational needs. The report produces industry, sub-industry and region-specific findings and, wherever possible, presents comparisons to developments at the State-level.

The purpose of this report is:

1. To provide a basis for understanding the Information, Media and Telecommunications sector in relation to employment levels, skills shortage occupations, current alignment and responsiveness of the vocational training market to the needs of the sector and to provide an overview of the challenges and opportunities in meeting industry vocational skills needs both now and into the future
2. To give detailed information around vocational training enrolments by occupation, location, qualification levels and other student characteristics, as it relates to the Information, Media and Telecommunications industry sector in order to gauge current trends in vocational training delivery
3. To summarise the context of the Information, Media and Telecommunications sector in relation to the size and scale of the labour and training markets as well as the current policy, economic and social drivers that it is facing.

Suite of Information Products & Tools

Victorian Quarterly Training Market Reports On-going series of quarterly reports aimed at providing a summary of Victorian training market performance following the introduction of the student entitlement system. The report covers three sections – the first provides an overview of the performance of the Victorian training market, the second section examines the participation of learners facing barriers and the third examines the alignment of training to industry skills needs http://www.education.vic.gov.au/training/providers/market/Pages/reports.aspx	**Vocational Training: Victoria's Regional Report** Annual publication examining training delivery in each of Victoria's regions in the context of the local population, economy and workforce, building a picture of the relationship between the local training system and regional skills needs, training market performance and responsiveness http://www.education.vic.gov.au/training/providers/market/Pages/regionaltrends.aspx	**Vocational Training: Victoria's Industry Report** Published annually, this report combines industry intelligence and economic analysis with training data to build a more complete picture of the relationship between industry skills needs, employment opportunities and skills training. Each of the 19 industry training profiles provide economic context and a summary of training challenges and highlights from IPM initiatives http://www.education.vic.gov.au/training/employers/industry/Pages/marketinfo.aspx
Industry Sub-sector summary reports & Industry Factsheets 46 sub-sector industry summary reports produced annually highlight industry labour and training market dynamics with an overview of current and forecast employment needs and vocational training patterns across the sectors and at the regional level A series of factsheets are also available for 19 industries http://www.education.vic.gov.au/training/employers/industry/Pages/marketinfo.aspx	**Business Toolkit and Case Studies** Toolkit for employers providing information on how to get government-subsidised training under the Victorian Training Guarantee; getting the best training for your business, with a helpful checklist; information of Recognition of Prior Learning; and a range of interesting employer and training provider case studies http://www.education.vic.gov.au/training/employers/workforce/Pages/marketfacilitation.aspx	**IPM Portfolio Industry Reports** Released in line with IPM Portfolio cycles, these reports describe training and economic activity and developments related to key Victoria's industry sectors. Highlighted are both the challenges the industry faces in attracting the right skills, and the opportunities businesses, training providers and government have to address these challenges. A range of key workforce and training metrics are also provided. There are two tiers of reports. One are detailed reports, representing the focus industries for the Department in 2013, and summary reports covering other industry sectors http://www.education.vic.gov.au/training/employers/industry/Pages/marketinfo.aspx
Industry Blog A forum for people interested in industry skills and training issues in Victoria, the blog features a range of topics relevant to stakeholders, information on recent industry events, groups and forums and new initiatives focused on enhancing market performance through facilitation activities http://skillsblogvic.wordpress.com/	**Industry Skills Update - e-Alerts** Regular email update featuring the latest news about IPM activities; market facilitation and related government initiatives; reports; and training performance information To subscribe contact: Department of Education & Early Childhood Development, skills.online@edumail.vic.gov.au	**Web Pages – Industry Training Market Information** 19 webpages with information about the skills and training market for industry sectors. For each industry, there's a training snapshot, information about skills in demand, training market intelligence reports and factsheets along with more detailed reporting for each industry sub-sector. Information is updated regularly http://www.education.vic.gov.au/training/employers/industry/Pages/marketinfo.aspx
Rate Your Training New ratings tool for industry and employers is a simple-to-use system where employers can rate the performance of a training provider in a particular study area against selected criteria, and review and compare the ratings of other employers http://rateyourtraining.com.au/	**E-Marketplace (in development)** Website which facilitates connections between employers and training providers. Employers can anonymously post their training requirements and training providers are able to provide structured response online. Employers are then able to review the response with no obligation, create a shortlist and follow up directly with their preferred providers	**Victorian Skills Gateway** One-stop-shop of Victorian vocational education and training to help find the best option for students. Searches can be performed on occupations, courses, training providers, video and written case studies. This website is also viewable via a purpose-built smartphone interface http://www.education.vic.gov.au/victorianskillsgateway/Pages/home.aspx

Industry and data scope

This section summarises the scope of the Information, Media and Telecommunications Industry[1] as well as key data sources.

Products and services

The Information, Media and Telecommunications industry includes businesses engaged in:

- creating, enhancing and storing information products in media that allows for their dissemination;
- transmitting information products using analogue and digital signals (via electronic, wireless, optical and other means);
- and providing transmission services and/or operating the infrastructure to enable the transmission and storage of information and information products.

Information products are defined as those which are not necessarily tangible, and, unlike traditional goods, are not associated with a particular form. The value of the information products is embedded in their content rather than in the format in which they are distributed. For example, a movie can be screened at a cinema, telecast on television or copied to video for sale or rental. The industry includes some activities that primarily create, enhance and disseminate information products, subject to copyright.

It is the intangible nature of the information products which determines their unique dissemination process, which may include via a broadcast, electronic means, or physical form. They do not usually require direct contact between the supplier/producer and the consumer, which distinguishes them from distribution activities included in the Wholesale Trade and Retail Trade industry.

Data

The main source of data on vocational training activities is the training activity database referred to as SV Training System (SVTS).

The report presents findings for the time period from 2008 to 2012, with an in depth analysis of developments and patterns in the 2012 calendar year. Latest quarterly data is also included to the June 2013 (Q2) period. The 2013 data is based on preliminary data extracted from SVTS as at August 2013 and subject to revision.

This report includes government subsidised training enrolments and domestic fee for service activities of TAFEs. However, TAFE fee for service activities below Certificate and those provided by private RTO and Adult Community Education providers are not included. Data on completions contain all government subsidised and fee for service enrolments at any course level by all providers.

[1] As defined by the Australian Bureau of Statistics.

Information, Media and Telecommunications industry trends and issues

This section focuses on the Information, Media and Telecommunications industry as a whole. It covers:

- the key issues and challenges including economic conditions, new regulations, demographic changes, changing social attitudes, new technology/processes, changing consumer tastes, environmental sustainability and the direction of industry restructuring.

Key issues and challenges

- As this industry includes both businesses engaged in providing services through more traditional avenues (publishing) and those using new and emerging technologies (internet publishing and broadcasting). The effect of some drivers (particularly technology) can have markedly different and often opposite impacts on sub-industries.
- A high-skilled workforce is vital to success for businesses in the Information, Media and Telecommunications industry.

Publishing

- Increasing use of the internet, and competition from other forms of entertainment have put pressure on the publishing sub industry, requiring greater diversification of products and services. The speed of change in this sector will be amplified by the rollout of the NBN which would also be anticipated to put downward pressure on Publishing.
- This industry has been negatively impacted by piracy, and this is likely to be exacerbated in the future as technological advancements make it easier.
- Businesses engaged in software publishing, however, are likely to benefit from in advancements in technology and the rollout of the NBN.

Motion Picture and Sound Recording

- Technological advancements are expected to benefit the Motion Picture and Sound Recording sub-industry, however some sub-sectors will be negatively impacted.
- The introduction of 3D technology has had a positive impact on Cinemas. Technological advancements have also decreased production costs for those businesses engaged in Motion Picture and Video production.
- At the same time, piracy continues to have a significant impact on the Motion Picture and Sound Recording sub-industry.
- Government funding for Motion Picture and Video Production businesses is increasing at all levels of government, a trend which is expected to continue into the future.
- The strength of the Australian dollar dampened film production in Australia, as it increased costs to foreign investors.

Broadcasting

- The Broadcasting sub-industry has also suffered from competition from other forms of entertainment. In particular free-to-air television broadcasting continues to experience audience decline which adversely affects advertising revenue. This industry has also been negatively impacted by piracy.
- Competition from online content will be further increased by the rollout of the NBN.
- Conversely, Pay TV broadcasters have used technology to improve their offerings, and as such may benefit from technological advancements. Growth in the rate of household formation has also benefitted Pay TV businesses.

Internet Publishing and Broadcasting

- The Internet Publishing and Broadcasting industry is anticipated to experience growth into the future, with the same drivers which threaten traditional publishing providing the Internet Publishing and Broadcasting industry with opportunities for strong growth.
- The rollout of the NBN will make streaming content over the internet more accessible than ever before, expanding the market for delivery of content over the web.
- Foxtel's exclusivity agreements for a range of content will expire over the next five years, improving the possible offerings of Internet Publishing and Broadcasting businesses.
- While new technology provides new opportunities for businesses in the Internet Publishing and Broadcasting sub-industry, it also brings new challenges, such as increased international competition.

Telecommunications Services

- The impact of technological drivers on the Telecommunications Services sub-industry varies markedly across different types of businesses.
- This is particularly evident in the contrast between business delivering wired telecommunications services and those offering wireless services. Households continue to shift away from traditional fixed-line telephone services, and towards alternatives such as mobile phones and Voice Over IP (VOIP).
- This sub-industry is expected to benefit from the rollout of the NBN.

Internet, Web and Data Services

- Unsurprisingly, the Internet, Web and Data Services sub-industry is expected to benefit from technological advancements. The demand for data processing and analysis is expected to increase, particularly for big data. Cloud computing technologies are also anticipated to benefit this sub-industry.
- The ongoing trend towards outsourcing of services will continue to benefit the Internet, Web and Data Services sub-industry.
- While international competition is a threat to this industry, demand from government will continue to flow to domestic businesses as government is reluctant to send work overseas.
- The sub-industry's workforce continues to shift towards higher skilled workers as low-skilled basic data entry positions disappear.

Library and Other Information Services

- The Library and Other Information Services sub-industry is strongly affected by the level of government funding.
- Several ongoing demographic trends will benefit the sub-industry. The ageing population will increase the demand for Library and Other Information Services, as will the casualisation of the workforce and increasing participation in secondary and higher education.
- Technological advancements are expected to benefit the sub-industry as they will assist to ensure the sub-industry remains relevant.

Table 2:1: Key trends in Information, Media and Telecommunications industry and their potential impacts on skills

Grouping	Change drivers	Skills impact						
		Publishing	Motion Picture and Sound Recording	Broadcasting	Internet Publishing and Broadcasting	Telecommunications Services	Internet, Web and Data Services	Library and Other Information Services
Political	Government funding/demand	=	↑	=	=	=	↑	↑
Economic	Outsourcing	=	=	=	=	=	↑	=
Social	Demographic trends	=	=	=	=	=	=	↑
Technological	Technological advancements	↓	↑	↓	↑	=	↑	=
	NBN rollout	↓	=	↓	↑	↑	↑	=
	Piracy	↓	↓	↓	=	=	=	=

Key:

↔ Driver has indirect impact on skills ;

= Driver has low skills impact, and places marginal pressure on skills development;

↑ Driver has high skills impact, and places upward pressure on skills development;

↓ Driver places downward pressure on skills development.

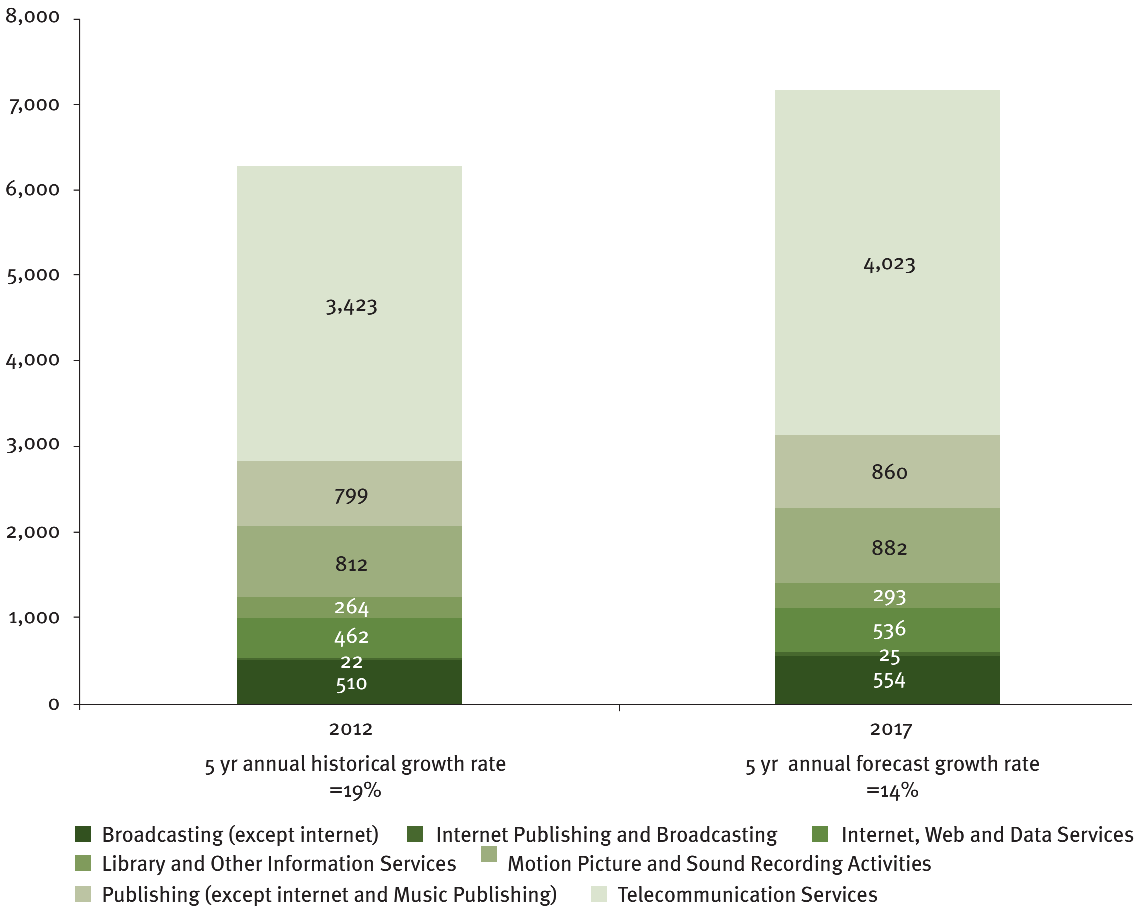
Economic contribution

Victoria's Information, Media and Telecommunications industry contributed approximately $6.3 billion to the state economy in 2011-12, around 2 per cent of total output. The industry directly employs approximately 62,200 workers, representing 2 per cent of Victorian employment.

Looking forward, output growth of 14 per cent is anticipated in the five years to 2017, to around $7.2 billion. This is the same as the anticipated state growth rate of 14 per cent across all Victorian industries. Victoria has seen an expansion in output in the 5 years to 2012 of 19 per cent. Telecommunication Services is easily the largest sub-sector at 54 per cent in 2012 rising to 56 per cent in 2017. The next largest sub-sectors remain are Motion Picture and Sound Recording Activities and Broadcasting both estimated to be 12 per cent of sector output in 2017.

A highly skilled workforce leads to increased productivity and economic growth. High quality education and skills training is essential for Victorians to access the opportunities of a growing and changing economy, and an increasingly sophisticated and information-rich society.

Figure 2:1: Information, Media and Telecommunications industry output ($ million)



Source: Monash Centre of Policy Studies (CoPS) Employment Forecasts, June 2012

Employer profile

At the end of the financial year in 2012, it was estimated that there were 4,914 businesses in the Victorian Information, Media and Telecommunications industry. The distribution of Information, Media and Telecommunications businesses by employment level is close to that for all industries. A portion of the 62 per cent of non-employing business will constitute self-employed contract workers as well as holding companies.

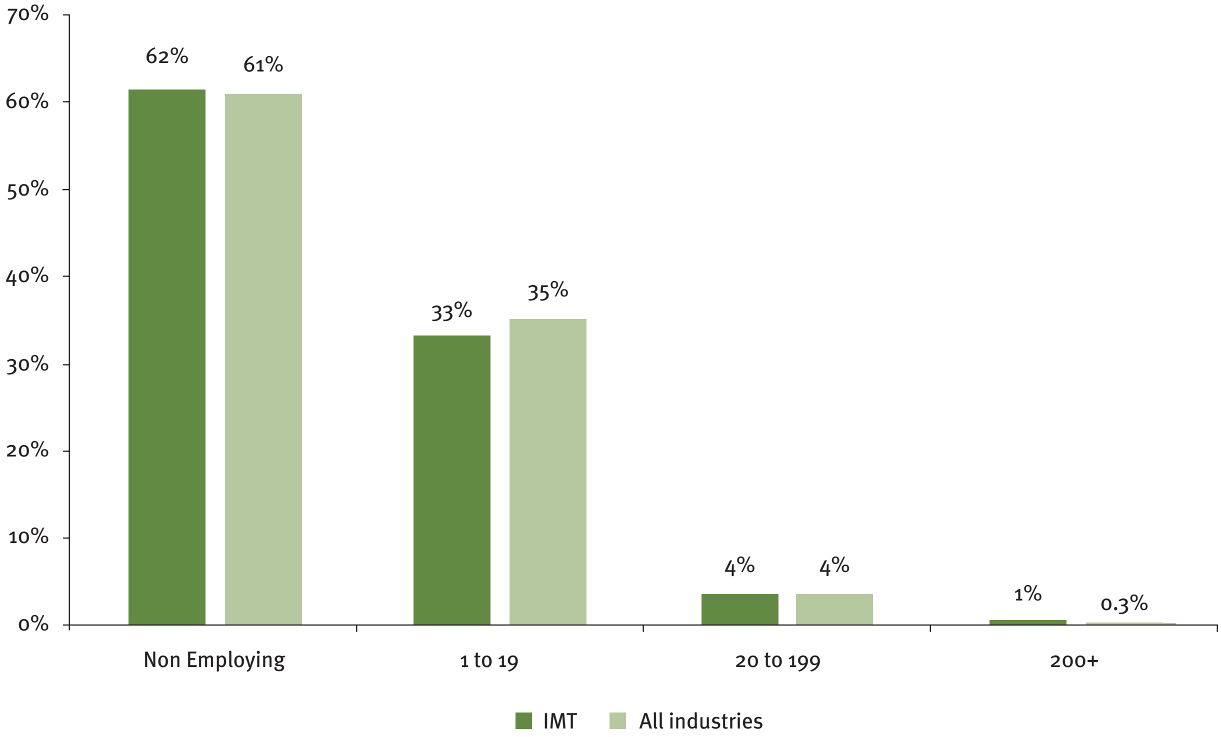
With regards to turnover, Victoria's Information, Media and Telecommunications businesses are more likely to be in the low (zero to less than $50,000) range of turnover, and less likely than average to a medium to large annual turnover (up to $2 million a year). In 2012, 330 firms reported turnover greater than $2 million. See Figure 2.2.

Approximately 86 per cent of the Information Media and Telecommunications industry is based in metropolitan Melbourne. Around 40 per cent of the industry is located in Melbourne's CBD and inner municipalities, including Boroondara, Glen Eira and Port Phillip, as shown in Figure 2.3.

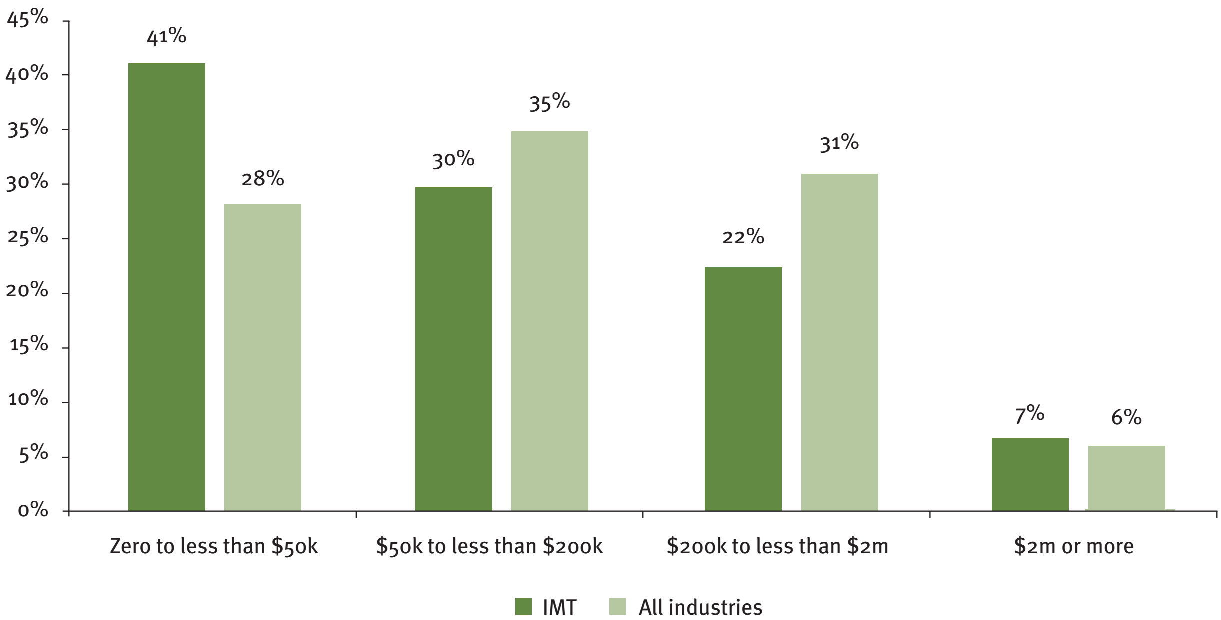
Regional Victoria is home to 13.5 per cent of business establishments in the Information Media and Telecommunications industry. Business establishments in the industry tend to be clustered around the larger regional centres of Geelong, Ballarat, Bendigo, the Macedon Ranges and Shepparton. Geelong was home to around 14 per cent of all regional business establishments in 2010-11.

Figure 2:2: Share of businesses by employment and turnover size, Victoria, 2012

Percentage of businesses by employment

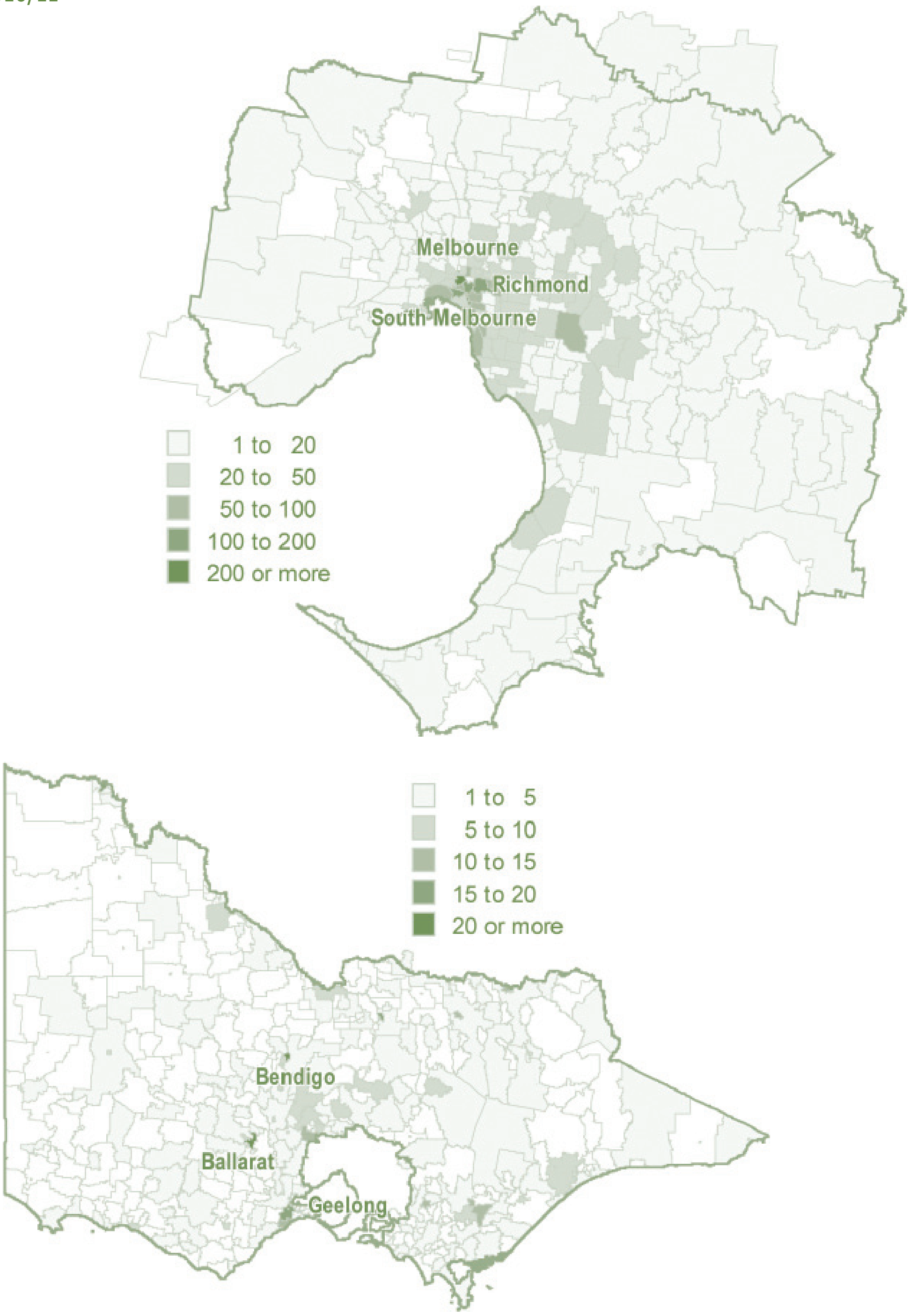


Percentage of businesses by turnover size



Source: Australian Bureau of Statistics (ABS), Count of Australian Businesses, including entries and exits, 2012

Figure 2:3: Location of Information, Media and Telecommunications industry establishments in Metropolitan and Regional Victoria, 2010/11



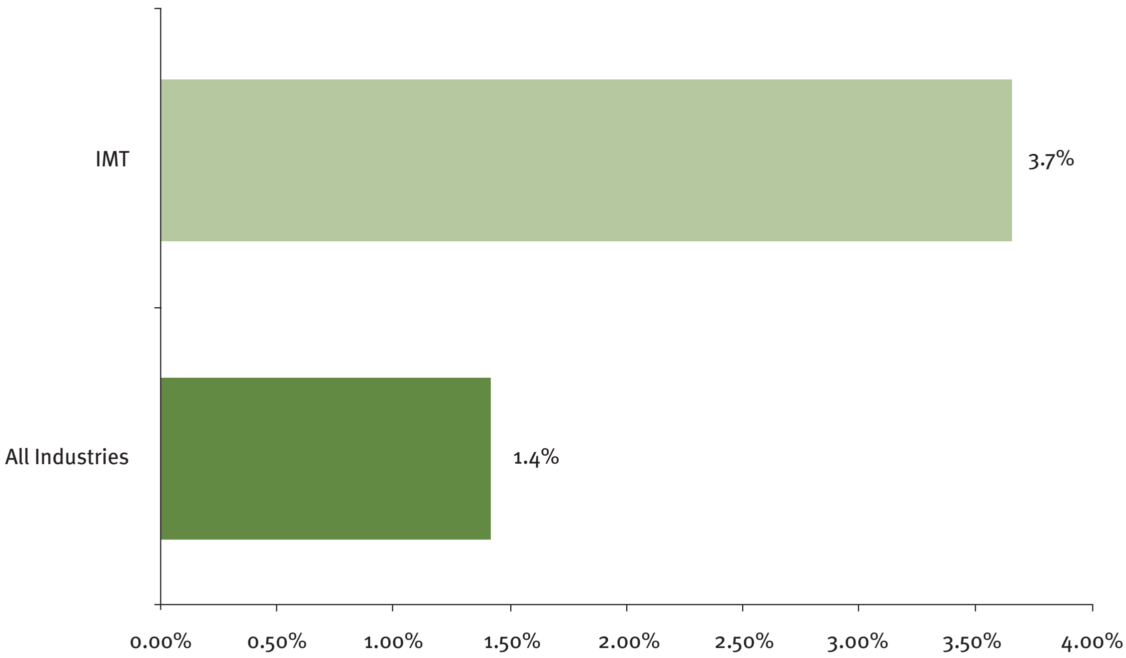
Source: Department of State Development, Business and Innovation (DSDBI), Information, Media and Telecommunications Industry. Business location in Victoria: A decade of change, October 2012 (based on data from WorkSafe Victoria).

Labour productivity

Labour productivity is defined as real gross value added per hour worked. Figure 2.4 below shows the average annual compound rate of growth in labour productivity for the Information, Media and Telecommunications industry over the period 2000-01 to 2011-12. Nationally the average compound annual growth rate of labour productivity for Information, Media and Telecommunications was 3.7 per cent, while the all industries average was 1.4 per cent.

Upskilling the workforce continues to be an important focus for increasing productivity, and producing more with less. A well-trained, job-ready workforce is the life-blood of Victoria's industry and business and the largest determinant of productivity in the State's economy.

Figure 2:4: Labour Productivity measure by Gross Value Added (GVA) per hour worked, average annual growth, 2000 - 2012



Source: Australian Bureau of Statistics (ABS), Australian System of National Accounts, 5204.0

Information, Media and Telecommunications industry workforce and skills

This section focuses on the Information, Media and Telecommunications industry's workforce. It covers employment levels and trends, as well as workforce characteristics such as age and skill level.

Key issues and challenges

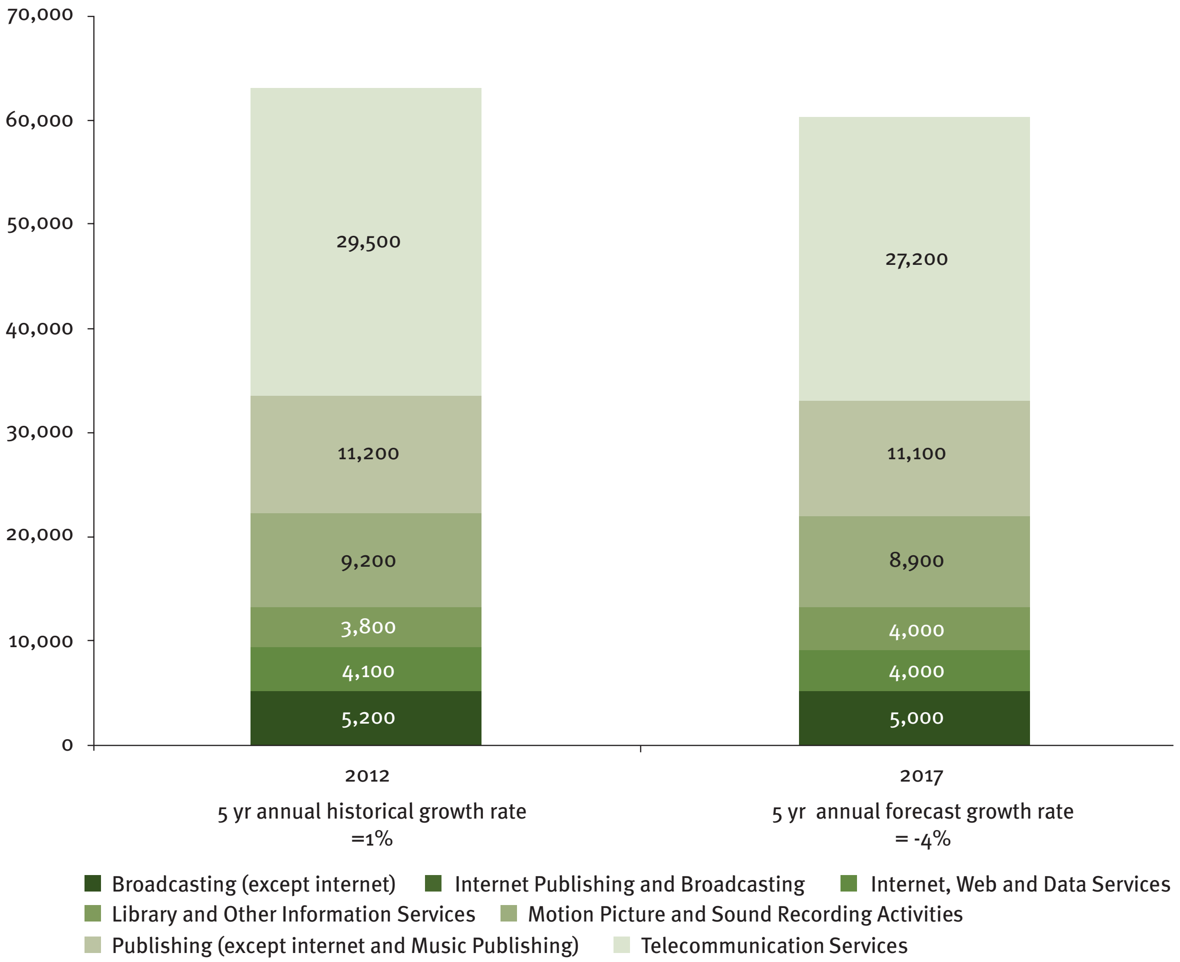
- Employment in the Information, Media and Telecommunications industry has been contracting, and this trend is forecast to continue. The industry has seen employment fall by 1 per cent over the last five years (around 300 employees). Over the next five years employment is forecast to contract by around 4 per cent (or 2,700 jobs).
- The industry's workforce has a fairly similar age profile compared to the all industries average.
- The Information, Media and Telecommunications industry employs a higher proportion of men (56 per cent) than women (44 per cent). This trend is driven by the largest sub-sector, Telecommunications Services which had a 61 per cent male workforce in 2011.
- A large proportion of the Information, Media and Telecommunications industry workforce (38 per cent) has Higher Education qualifications, higher than the all industry average of 29 per cent. Over time the skill composition of the industry has been shifting towards higher skilled workers, and this trend is anticipated to continue into the future.
- Two occupations in the Information, Media and Telecommunications industry – Telecommunications Trades Workers and Telecommunications Technical Specialists – are considered to be specialised and in shortage.
- A quality, highly-skilled workforce is identified as critical to the success of businesses in the Information, Media and Telecommunications industry.
- The industry continues to face significant challenges in meeting its workforce needs.
- Change in the industry (particularly the IT sector) is fast and constant, making it difficult for training courses to reflect current industry skill needs.
- Improving completion rates for VET qualifications in IT remains a challenge, as does recruiting suitably-qualified VET practitioners to maintain quality in training delivery.

Employment

Approximately 62,200 people are employed in Victoria's Information, Media and Telecommunications industry. The industry has seen employment contract by 1 per cent over the last five years, equating to approximately 300 employees. Employment peaked in 2009-10 at 65,100 employees. The outlook over the next five years is for employment to reduce by approximately 4 per cent (or 2,700 jobs).

Telecommunications Services remains the largest sub-sector for employment but is forecast to shed around 2300 jobs between 2012 and 2017. The only sub-sector predicted to grow over the period is Library and Other Information Services, which is expected to add 200 positions.

Figure 3.1: Information, Media and Telecommunications employment in Victoria

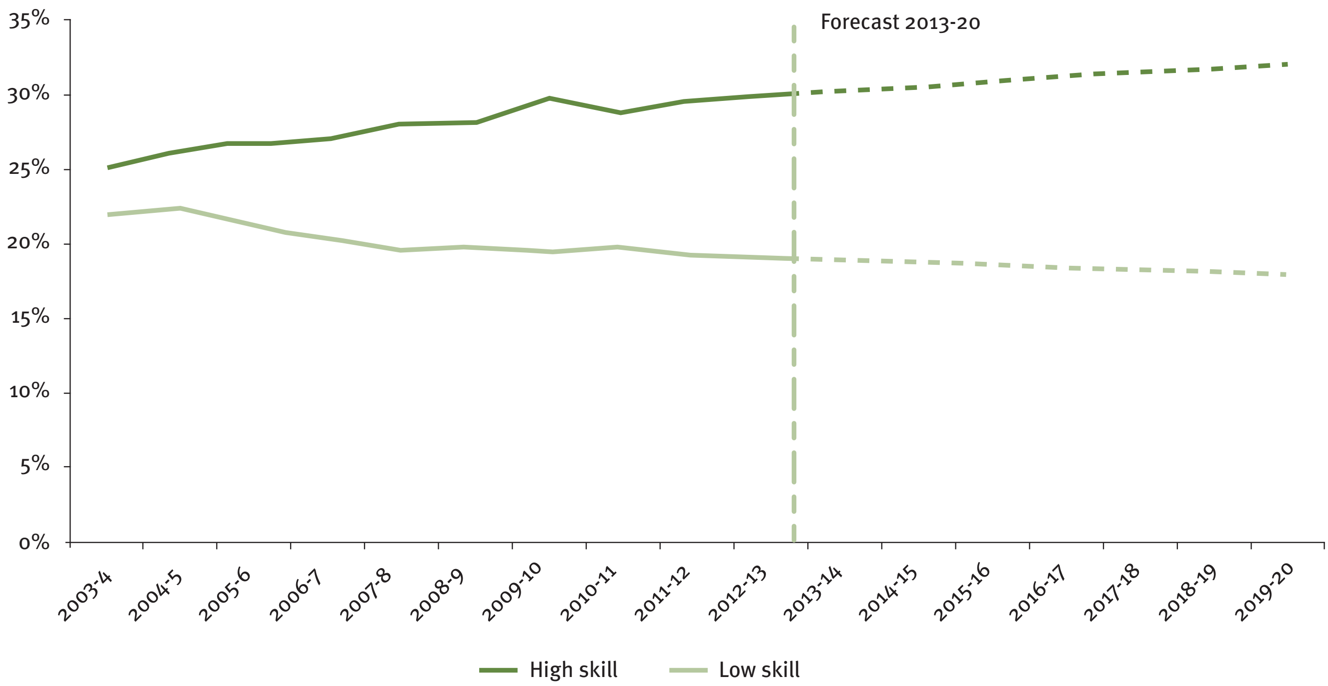


Source: Monash Centre of Policy Studies Employment Forecasts, June 2012

Skills composition

The Information, Media and Telecommunications sector's high skill and low skill roles show a divergent pattern – highly skilled roles as a percentage of the overall workforce are increasing over time. By 2019/20 high skill roles constitute 32 per cent of the workforce up from 25 per cent in 2003/04. Low skill roles drop to 22 per cent from 18 per cent of the total workforce over the same period.

Figure 3:2: Victorian Information, Media and Telecommunications industry skill levels



Source: Monash Centre of Policy Studies Employment Forecasts, June 2012

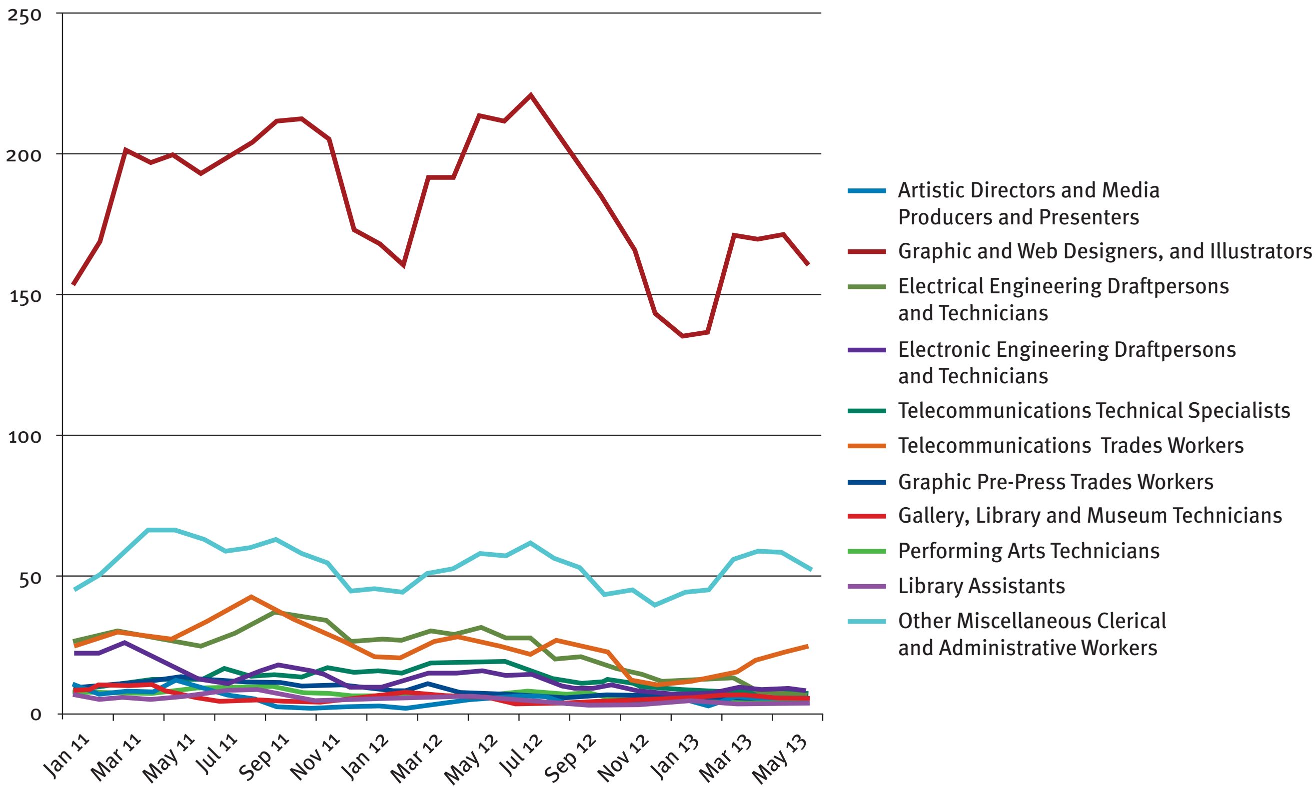
Note: High skill—managers and professionals. Medium skill—technicians and trades workers, community and personal service workers. Low skill—clerical and administrative workers, sales workers, machinery operators, drivers and labourers.

Job vacancies

Figure 3.3 below highlights the number of vacancies posted online in Victoria over the last two years for selected key Information, Media and Telecommunications occupations. The number of online job advertisements across the larger Information, Media and Telecommunications occupations has fluctuated over the period, but has shown no clear upward or downward trend. This differs from the decreasing trend seen in the national Internet Vacancy Index.[2]

There were approximately 930 newly lodged vacancies in the Information, Media and Telecommunications occupational groupings in June 2013. Apart from Other Miscellaneous job listings the largest occupational grouping for vacancies was Graphic, Web Designers and Illustrators. The second largest group is Telecommunications Technical Specialists, both VET-related occupations that consistently show the highest number of vacancies over the time series.

Figure 3:3: Number of newly lodged online vacancies in Information, Media and Telecommunications occupations in Victoria, 2012-13



Source: Department of Education, Employment and Workplace Relations (DEEWR) Internet Vacancy Index (based on a count of online vacancies newly lodged on SEEK, My Career, CareerOne and Australian JobSearch), major advertising occupations only.

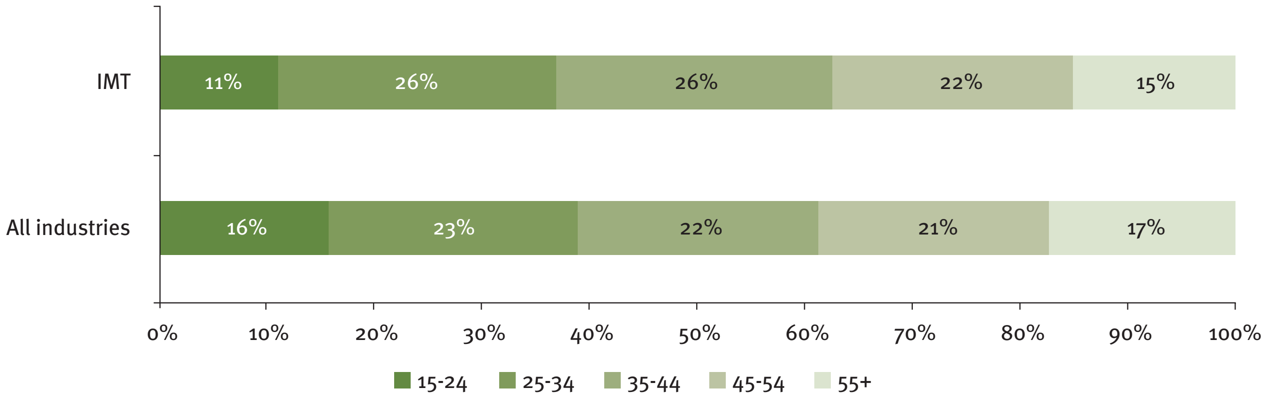
[2] Department of Education, Employment and Workplace Relations, DEEWR Vacancy Report, February 2013

Labour market characteristics

Employment by Age

The age distribution of the Information, Media and Telecommunications industry workforce is fairly similar to that for all industries. The proportion of employees is slightly lower than average in the youngest and oldest age groupings and slightly higher for the age groups between 25 and 54.

Figure 3:4: Employment by age (proportion), 2011-12

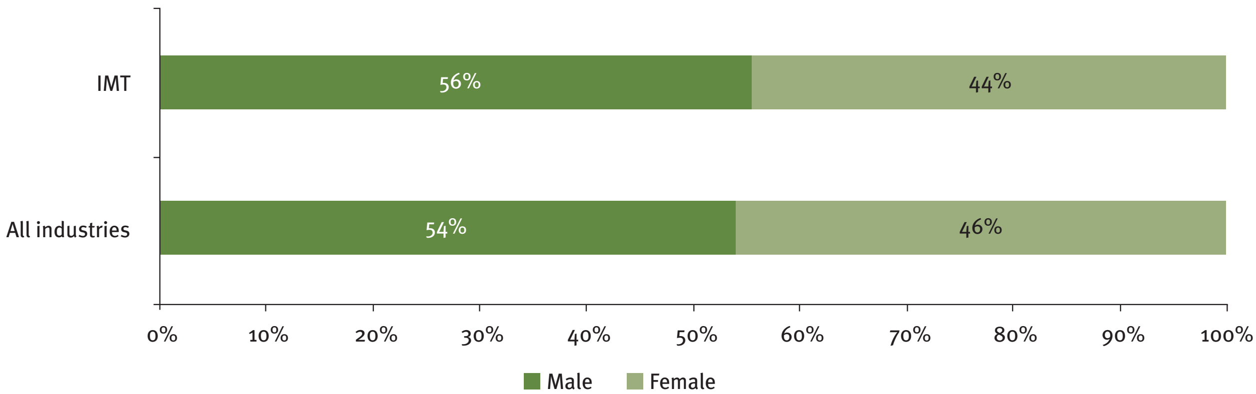


Source: Monash Centre of Policy Studies Employment Forecasts, June 2012

Employment by Gender

The Information, Media and Telecommunications industry employs a higher proportion of men (56 per cent) than women (44 per cent). This trend is driven by the largest sub-industry, Telecommunications Services which had a 61 per cent male workforce in 2011. One sub-industry, Library and Other Information Services reverses this trend, employing a very high proportion of women (78 per cent).

Figure 3:5: Employment by gender (proportion), 2011-12

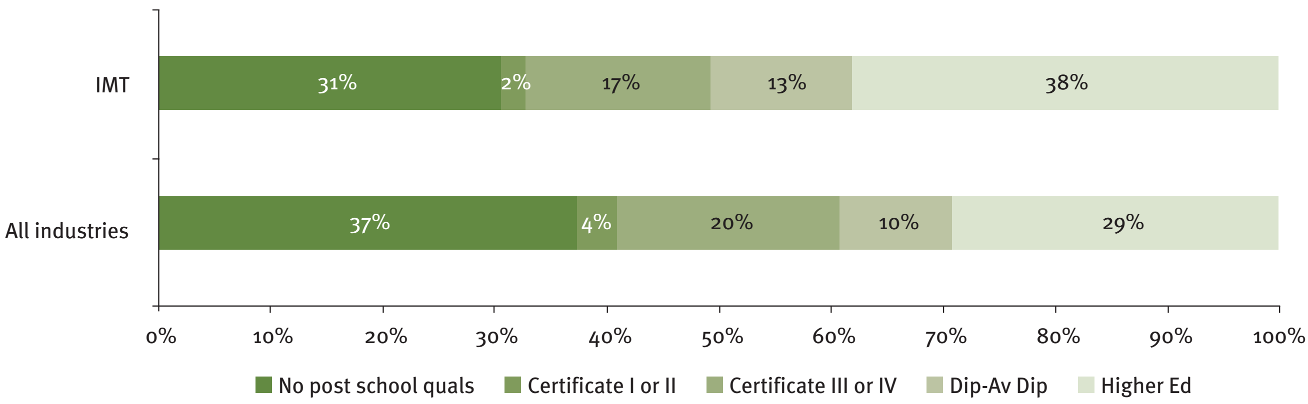


Source: Monash Centre of Policy Studies Employment Forecasts, June 2012

Employment by Qualification

A large proportion of the Information, Media and Telecommunications industry workforce (38 per cent) has Higher Education qualifications, higher than the all industry average of 29 per cent. Consequently, other qualification levels are underrepresented except for Diploma/Advanced Diploma at 13 per cent, also slightly higher than the all industries average.

Figure 3:6: Employment by qualification level (proportion), 2011-12



Source: Monash Centre of Policy Studies Employment Forecasts, June 2012

Employment trends by occupation

Table 3.1 opposite highlights the occupations at four-digit ANZSCO level (Australian and New Zealand Standard Classification of Occupations) that align to the Information, Media and Telecommunications industry.

Forecasts presented in the table estimate the expected average annual employment needs. The average annual employment needs includes employment growth or decline[3] and replacement demand[4] by occupation for the next five years.

Over the next five years within the Information, Media and Telecommunications industry the average annual employment needs is expected to be approximately 3,700 per year.

[3] Forecast employment growth or decline is the expected change in the number of jobs within an occupation year to year. The period presented in the table from 2011-12 to 2016-17.

[4] Replacement demand is the number of existing workers that are forecast to leave the occupation through retirement, moving into different industry or occupation or moving interstate etc. that require replacing to meet existing employment needs.

Table 3:1: Estimated annual employment growth + replacement demand figures for occupations in the Information, Media and Telecommunications sector across Victoria

Occupation name	2011 -12 employment total	Average annual employment needs	Overall employment growth to 2016-17
Inquiry Clerks	3,360	190	-240
Telecom Engineering Professionals	2,950	280	500
Telecommunications Trades	2,640	50	-500
Journalists & Other Writers	2,520	270	320
Advertising & Sales Managers	2,070	120	220
Sales Representatives	1,770	110	220
ICT Managers	1,690	100	110
Graphic & Web Designers	1,570	110	260
ICT Sales Assistants	1,510	60	-70
Artistic Directors etc	1,430	120	100
Telecom Technical Specialists	1,360	20	-200
Call/Contact Centre Workers	1,360	80	90
Librarians	1,340	800	0
Film,TV,Radio,Stage Director	1,330	190	70
ICT Support Technicians	1,270	100	150
Contract/Prog/Project Admin	1,260	70	230
Ticket Salespersons	1,240	50	-120
General Managers	1,160	70	230
Advertising & Marketing Professionals	1,150	60	160
Software & Application Programmers	1,130	60	60
Sales Assistants (General)	1,080	50	-30
Gallery,Libry,Museum Techns	1,050	700	0
Performing Arts Technicians	990	80	-70
Accountants	960	50	60
ICT Sales Professionals	960	60	160
General Clerks	950	40	80
Mgment/Organisation Analysts	850	60	160
Keyboard Operators	840	0	-120
Computer Network Professionals	820	40	50

VET occupations highlighted in green

Key messages at the occupational level are that there is currently forecast to be substantial employment growth and replacement demand to 2016-17 in:

- Graphic and Web Designers (+110 on average annually) and an estimated overall employment growth in the occupation of around 260 workers between 2011-12 and 2016-17
- Artistic Directors (+120 annually), and an estimated overall employment growth in the occupation of around 100 workers between 2011-12 and 2016 17
- Telecom Technical Specialist (+20 annually) and an estimated overall employment growth in the occupation of around 200 workers between 2011 12 and 2016-17
- Gallery, Library, Museum Technicians (+70)
- Performing Arts Technicians (+80)

There are also a number of occupations where overall employment growth is expected to decline:

- Telecommunications Trades Workers are anticipated to have low average annual employment needs of around 50 per year and to decline overall by 500 employees. This is particularly large considering the current employment level in this occupation is around 2,640, making this a decline of around 19 per cent of the current workforce.
- Telecommunications Technical Specialists are anticipated to have low average annual employment needs of around 20 per year, and a large decline in overall employment to 2016-17 of 200.

Specialised[5] and in-shortage occupations

This section focuses on current skills shortages in specific occupations related to the Information, Media and Telecommunications industry as well as those occupations that are specialised. The Department's analysis of skill shortages considers both quantitative evidence and intelligence gathered through industry consultation.

Highlighted below are the occupations within the Information, Media and Telecommunications industry that are deemed to be specialised and/or in shortage. Table 3.2 then provides a summary of all relevant occupations by specialised and in-shortage status.

The **Telecommunications Technical Specialists** occupation are identified as both an occupation in skills shortage and a specialised occupation with this occupation experiencing recent high growth, which is expected to continue. Moreover, the roll-out of the NBN is also expected to increase demand for this occupation.[6] This occupation will be watched closely over 2014 with the changing federal policy environment.

Telecommunications Technical Specialists	Skills Shortage	✔	Specialised Occupation	✔

Telecommunications Trades Workers are identified as both an occupation in skills shortage and a specialised occupation.[7]

Telecommunications Trades Workers	Skills Shortage		Specialised Occupation	✔

Table 3.2, over, details Information, Media and Telecommunications sector occupations by their specialised and in-shortage statuses.

[5] DEECD used the Australian Workforce and Productivity Agency (formerly Skills Australia) list of specialised occupations. These occupations have a long lead-time for training, high economic value and a significant match between training and employment

[6] 2013 IBSA Environmental Scan of the Information and Communications Technology Industry; DEECD Skills analysis tool/Australian Workforce and Productivity Agency

[7] Deloitte Access Economics, 2012 Market Effectiveness Report

Table 3:2: Occupations 'in shortage' or 'specialised'

Occupation	In shortage	Specialised
Inquiry Clerks	No	No
Telecommunications Engineering Professionals	No	Yes
Telecommunications Trades Workers	Yes	Yes
Journalists and Other Writers	No	No
Advertising and Sales Managers	No	No
Sales Representatives	No	No
ICT Managers	No	No
Graphic and Web Designers	No	No
ICT Sales Assistants	No	No
Artistic Directors etc	No	No
Call/Contact Centre Workers	No	No
Telecommunications Technical Specialists	Yes	Yes
Librarians	No	No
Film, Television, Radio and Stage Directors	No	No
ICT Support Technicians	No	No
Electronic Trades Workers	No	Yes

Information, Media and Telecommunications industry vocational training provision

This section focuses on training provided for the Information, Media and Telecommunications industry. It covers training activity (including a regional analysis), courses, providers and student characteristics.

Key messages

- Across the VET sector as a whole, a number of courses experienced unprecedented high levels of enrolments in 2012. Subsequently, over the period between Q2 2012 and Q2 2013 there have been shifts towards training delivered in areas that better meet the requirements of the Victorian economy. These trends are reflected in the data for some sections of the Information, Media and Telecommunications industry.
- Government subsidised enrolments in Information, Media and Telecommunications courses have increased between 2008 and 2012, up 82 per cent to around 3,900. This is driven by the Motion Picture and Sound Recording Activities and Telecommunications Services sub-industries. In Q2 2013 there were around 2,600 enrolments in the Information, Media and Telecommunications industry.
- A large number of Information, Media and Telecommunications enrolments are at the Diploma and above level (47 per cent). This compares to 19 per cent of enrolments at the Diploma and above level across all industries.
- Performing Arts Technicians are the largest occupational grouping, with around 630 enrolments in 2012.
- The majority of training is with TAFEs, who accounted for around 86 per cent of industry enrolments in 2012.
- In 2012, the largest region in terms of Information, Media and Telecommunications training delivery was Inner Melbourne, accounting for 36 per cent of industry enrolments.

Training activity

Table 4:1 below gives a summary of training activity for the Information, Media and Telecommunications industry over the period 2008 to 2012.

Enrolments

Government subsidised enrolments in Information, Media and Telecommunications courses have increased between 2008 and 2012, up 82 per cent to around 3,900. This is driven by the Motion Picture and Sound Recording Activities and Telecommunications Services sub-industries.

At the same time, TAFE fee for service enrolments have increased from around 600 in 2008 to 2100 in 2012. Information, Media and Telecommunications is now the 15th largest industry in terms of government subsidised training delivery, down from 14th in 2008.

Apprentices and trainees

There were approximately 160 trainee enrolments in courses relating to Information, Media and Telecommunications in 2012, 4 per cent of all enrolments in this industry. Most of the trainee positions relate to Cabler (Data and Telecommunication), Graphic Pre-press Trades Worker and Production Assistant (Film, Radio, TV, Stage).

Information, Media and Telecommunications has a low proportion of apprentices and trainees compared to all industries at 25.5 per cent of enrolments.

Specialised and in shortage occupations

Approximately 13 per cent of Information, Media and Telecommunications industry enrolments are linked to specialised or in-shortage occupations. The specialised and in-shortage enrolments are in qualifications that relate to either the Cabler (Data and Telecommunications) occupation (around 280 enrolments) or the Telecommunications Technical Officer or Technologist profession.

Qualification Level

A large number of Information, Media and Telecommunications enrolments are at the Diploma and above level (47 per cent). This compares to 19 per cent of enrolments at the Diploma and above level across all industries.

Completed qualifications

In 2012, Information, Media and Telecommunications sector completions grew by 16 per cent to 2,100 in total. Completions at Diploma+ (53 per cent) and Certificate III-IV levels (38 per cent) accounted for the bulk of completions. Seventy four per cent of all completions were in the Motion Picture and Sound Recording Activities subsector.

Table 4:1: Key training activity in the Information, Media and Telecommunications industry, 2008-2012, Q2 2012–Q2 2013

Government subsidised enrolments

Industry Subdivision	2008	2009	2010	2011	2012	2011–12	Q2 2012	Q2 2013	Q2 2012–13
Broadcasting (except Internet)	120	20	<10	-	-	N/A	-	-	N/A
Library and Other Information Services	1,070	1,170	1,090	1,040	840	-19%	750	450	-40%
Motion Picture and Sound Recording Activities	450	1,000	1,460	1,980	2,320	17%	2,130	1,760	-17%
Publishing (except Internet and Music Publishing)	110	110	100	80	70	-6%	50	40	-10%
Telecommunications Services	380	720	860	670	640	-4%	530	320	-39%
All IMT	2,130	3,020	3,510	3,770	3,880	3%	3,460	2,570	-26%

Apprentice or trainee

Industry Subdivision	2008	2009	2010	2011	2012	2011–12	Q2 2012	Q2 2013	Q2 2012–13
Broadcasting (except Internet)	<10	<10	-	-	-	N/A	-	-	N/A
Library and Other Information Services	10	20	20	20	20	-33%	10	10	-14%
Motion Picture and Sound Recording Activities	20	30	30	10	40	202%	10	50	286%
Publishing (except Internet and Music Publishing)	10	20	30	30	40	14%	20	30	40%
Telecommunications Services	130	120	110	80	60	-29%	40	20	-43%
All IMT	170	200	180	150	160	2%	90	120	31%

Specialised or in-shortage

Industry Subdivision	2008	2009	2010	2011	2012	2011–12	Q2 2012	Q2 2013	Q2 2012–13
Telecommunications Services	210	590	690	490	520	7%	430	320	-26%
All IMT	210	590	690	490	520	7%	430	320	-26%

Qualification levels – 2012

Industry Subdivision	Cert. I-II	Cert. III-IV	Dip.+	Total	Cert. I-II	Cert. III-IV	Dip.+	
Library and Other Information Services	30	370	450	840	3%	44%	53%	100%
Motion Picture and Sound Recording Activities	210	950	1,160	2,320	9%	41%	50%	100%
Publishing (except Internet and Music Publishing)	10	60	<6	70	13%	79%	8%	100%
Telecommunications Services	170	270	210	640	27%	41%	32%	100%
All IMT	420	1,630	1,820	3,880	11%	42%	47%	100%

Completed qualifications

Industry Subdivision	2008	2009	2010	2011	2012	2011–12
Broadcasting (except Internet)	50	20	-	-	-	N/A
Library and Other Information Services	130	130	230	280	290	2%
Motion Picture and Sound Recording Activities	110	250	970	1,220	1,560	28%
Publishing (except Internet and Music Publishing)	10	30	30	30	20	-21%
Telecommunications Services	70	110	200	290	230	-19%
All IMT	370	530	1,430	1,820	2,110	16%

Information, Media and Telecommunications industry courses

The top 15 courses in Information, Media and Telecommunications captures 80 per cent of industry enrolments. The Diploma of Library Information Services attracted the most enrolments in 2012. A stable pattern of enrolments has been displayed for most courses in 2011 and 2012.

Table 4:2: Top 15 Information, Media and Telecommunications qualifications ranked by 2012 enrolments, government subsidised, 2008-2012, Q2 2012-Q2 2013

Course name	2008	2009	2010	2011	2012	Q2 2012	Q2 2013
Diploma of Library-Information Services	440	790	510	430	380	350	40
Diploma of Specialist Make-up Services		30	190	300	360	330	320
Certificate III in Media	‹10	300	390	330	310	220	150
Certificate IV in Sound Production				280	290	280	260
Diploma of Screen and Media	‹10	90	130	180	290	280	230
Certificate IV in Library-Information Services	200	70	270	350	280	250	30
Advanced Diploma of Screen and Media		100	230	250	260	250	230
Advanced Diploma of Electronics and	‹10	180	270	190	170	150	100
Certificate IV in Screen and Media	‹10	80	80	130	150	130	90
Certificate III in Telecommunications	50	120	230	160	130	120	50
Certificate II in Creative Industries (Media)	20	80	190	90	130	110	20
Advanced Diploma of Sound Production				121	112	107	161
Certificate IV in Make-up			‹10	60	90	70	60
Certificate I in Creative Industries		‹10	10		80	80	‹10
Certificate III in Library- Information Services	210	130	170	120	80	70	10

Note: course totals include equivalent superseded courses.

Information, Media and Telecommunications industry enrolments by occupation

The top five Information, Media and Telecommunications related occupations for vocational training take in 65 per cent of industry enrolments. Performing Arts Technicians are the largest occupational grouping, more than doubling over the period 2008-2012. Production Assistant grew rapidly between 2008 and 2010 and is the second largest occupation in 2012. Sound Technician, the third largest occupation has also grown from 50 enrolments in 2008 to 470 in 2012.

Table 4:3: Information, Media and Telecommunications occupations ranked by 2012 enrolments, government subsidised, 2008-2012, Q2 2012-Q2 2013

Occupation	2008	2009	2010	2011	2012	Q2 2012	Q2 2013
Performing Arts Technicians nec	310	380	350	460	630	600	490
Production Assistant (Film, Television, Radio or Stage)	100	390	590	430	520	410	180
Sound Technician	50	80	90	470	470	460	470
Make Up Artist	20	50	200	360	450	400	390
Library Technician	620	960	620	530	450	410	260
Library Assistant	450	210	470	510	390	340	190
Cabler (Data and Telecommunications)	80	180	260	230	280	230	170
Multimedia Designer		100	230	250	260	250	230
Telecommunications Technical Officer or Technologist	130	400	430	260	250	200	150
Electrical or Telecommunications Trades Assistant	60	80	140	170	120	90	0
Graphic Pre-press Trades Worker	110	110	100	80	70	50	40
Electronic Engineering Technician	110	60	30	20	<10	<10	<10

Please see Appendix A for Occupations/associated Qualifications with Funding Bands (available for 2011 and 2012)

Information, Media and Telecommunications industry training providers

A total of 32 training providers delivered government subsidised Information, Media and Telecommunications sector training 2012, however only 8 providers have more than 100 enrolments.

The number of providers delivering government subsidised training has increased from 24 in 2008. In Q2 2013 there were a total of 29 providers.

The majority of training is with TAFE providers, who accounted for around 86 per cent of industry enrolments in 2012. Most enrolments over the period from 2008 have been in the TAFE system. Private and ACE provision together are at their highest level in Q2 2013 with 16 per cent of all enrolments.

Table 4:4: Information, Media and Telecommunications provider types ranked by 2012 enrolments, government subsidised, 2008-2012, Q2 2012-Q2 2013

Provider type	2008	2009	2010	2011	2012	Q2 2012	Q2 2013
ACE	3%	2%	1%	1%	3%	3%	2%
Private	1%	1%	2%	6%	11%	10%	14%
TAFE	96%	97%	97%	93%	86%	87%	84%

Funding patterns

Courses by funding band[8]

In 2012, around 75 per cent of Information, Media and Telecommunications courses were within Bands A to C representing 42 courses.

Table 4:5: Information, Media and Telecommunications courses by subsidy band, 2012

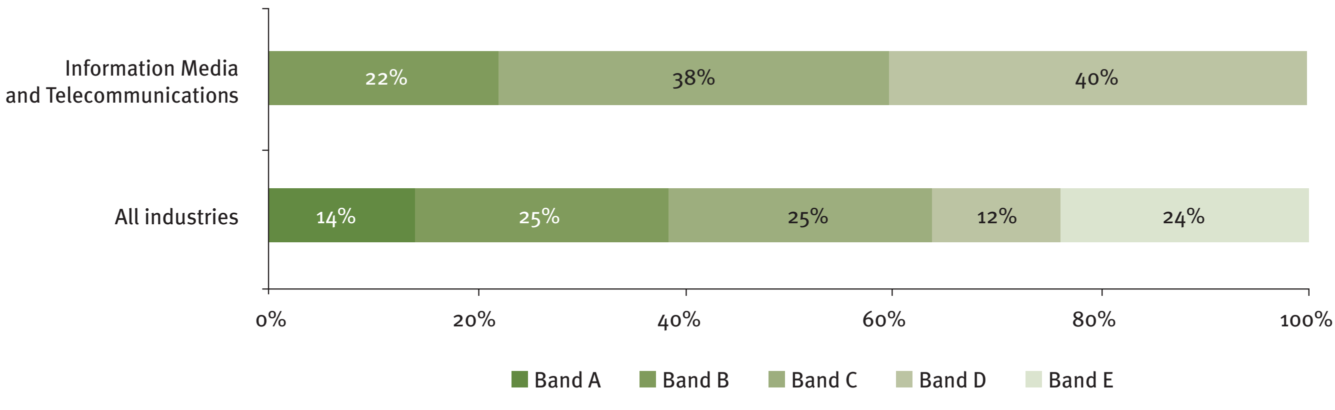
Subsidy Band	Number of Courses	% Total
Band A	1	2%
Band B	14	33%
Band C	17	40%
Band D	10	24%
Band E	0	0%

Enrolments by funding band

Sixty per cent of enrolments in Information, Media and Telecommunications industry courses in 2012 were in subsidy bands B and C. The remaining enrolments were in funding Band D.

See Appendix A for a list of courses with associated subsidy bands for 2011 and 2012.

Figure 4:1: Enrolments by subsidy band, government subsidised, 2012



[8] As part of the Victorian Refocussing Vocational Training reforms, the government is retaining and strengthening the individual entitlement to a subsidised training place to ensure that businesses and students continue to have choice over what and where they study and ensuring the cost of such access remains sustainable and in areas of greatest public value. Under the new arrangements, higher hourly subsidy rates have been attributed to foundation and apprenticeship qualifications, and lower rates to diplomas and above (where there is higher private benefit and income contingent student loans available) and to lower-level certificates where direct vocational benefit is lower. The subsidy for each course reflects an assessment of its current "public value"- with courses of greatest public value receiving the highest level of subsidy (Band A), and courses of lowest public value the least (Band E).

Regional training activity

In 2012, the largest region in terms of Information, Media and Telecommunications training delivery was Inner Melbourne, accounting for 36 per cent of industry enrolments. This proportion of all enrolments has remained the same from 2011. There has been a 17 per cent decrease in Eastern Metropolitan Melbourne which remains the second largest region in 2012.

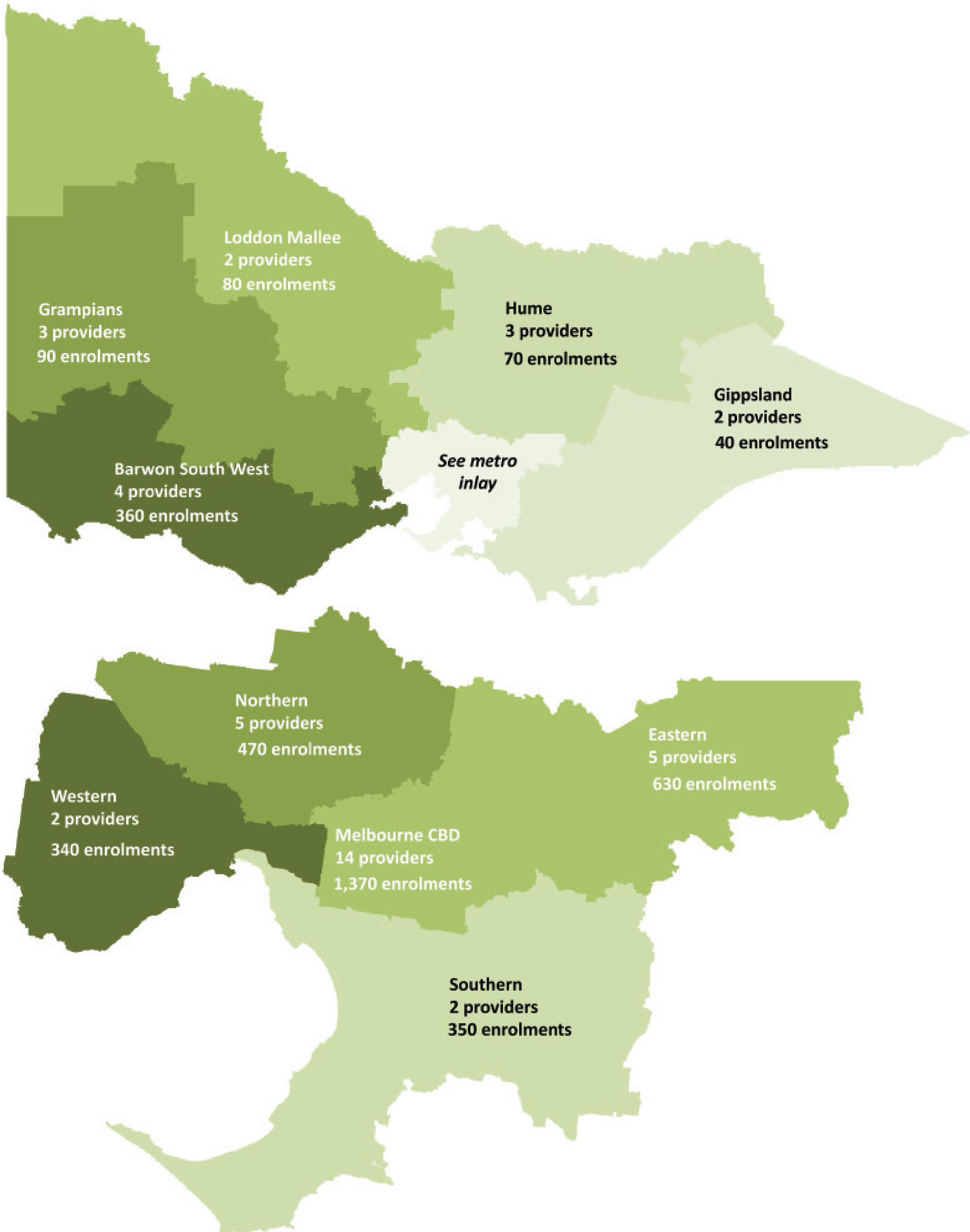
Barwon South West is the largest regional area for Information, Media and Telecommunications training, increasing 77% between 2011 and 2012.

Table 4:6: Victorian regions ranked by 2012 enrolments, government subsidised, 2008-2012, Q2 2012-Q2 2013

Region	2008	2009	2010	2011	2012	Q2 2012	Q2 2013
Melbourne CBD	640	720	1,060	1,240	1,370	1,280	1,080
Eastern Metropolitan	620	840	680	760	630	560	340
Western Metropolitan	180	160	200	190	340	300	180
Loddon Mallee	<10	20	30	40	80	80	30
Southern Metropolitan	100	210	350	470	350	320	170
Barwon South West	50	160	190	200	360	310	330
Northern Metropolitan	200	420	450	370	470	370	320
Hume	70	80	70	50	70	50	30
Gippsland	<10	60	70	40	40	40	10
Grampians	70	50	90	110	90	80	50

Note: regional enrolment figures sum to slightly more than the overall Victoria-wide figures due to a small number of students undertaking training in campuses in more than one region

Figure 4:2: Numbers of Providers and Enrolments in Information, Media and Telecommunications in Victoria, 2012



Student characteristics

Students from diverse backgrounds engage in vocational training in Information, Media and Telecommunications fields. The strongest representation in each year was from students in the 25+ age group in absolute terms. There were however some very small declines in student numbers across different learner groups between 2011-12 such as students with Culturally and Linguistically Diverse Backgrounds (CALD) (-4 per cent), unemployed students (-2 per cent) as well as students in the 25+ age group (-11 per cent). Interestingly, enrolments by students aged over 25 years have grown 72 per cent between Q2 2012 and Q2 2013.

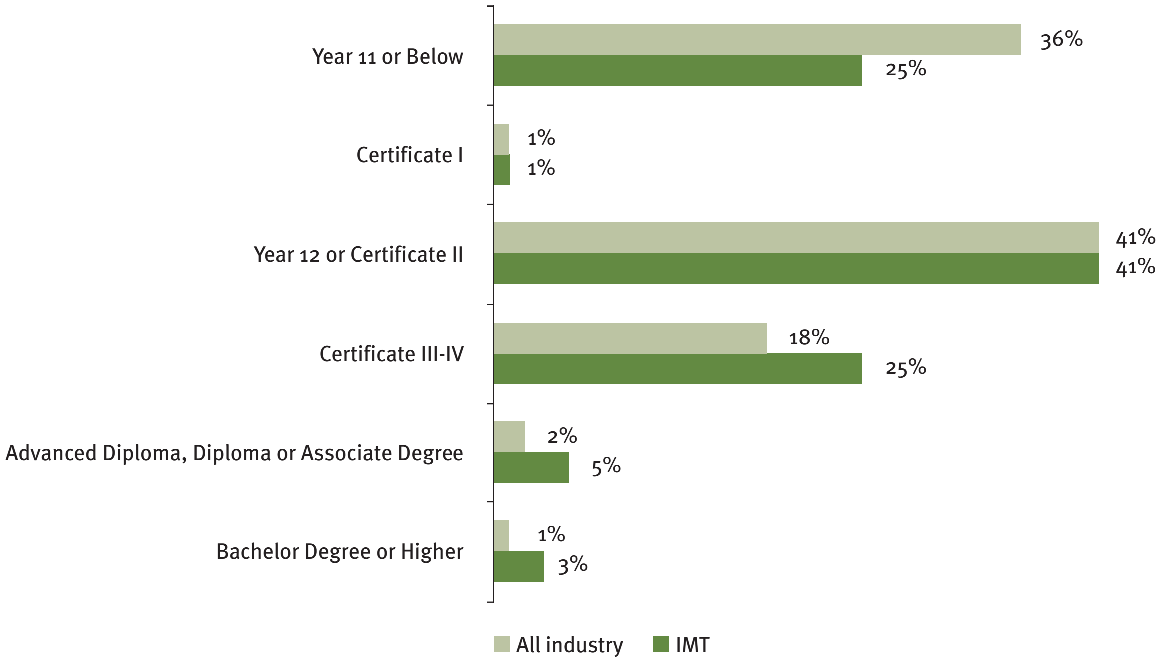
Table 4.7: Enrolments by learners facing barriers, government subsidised, 2008-2012, Q2 2012-Q2 2013

Learner Groups	2008	2009	2010	2011	2012	Q2 2012	Q2 2013
Indigenous	20	30	40	30	40	40	20
Disability	190	270	330	420	490	420	290
CALD	420	580	680	670	640	550	400
Unemployed	430	720	950	1,160	1,140	1,050	810
Aged 25+	1,290	1,550	1,620	1,560	1,390	750	1,290

At the time of enrolment, students enrolling in Information, Media and Telecommunications courses were typically more qualified than the average across all industries.

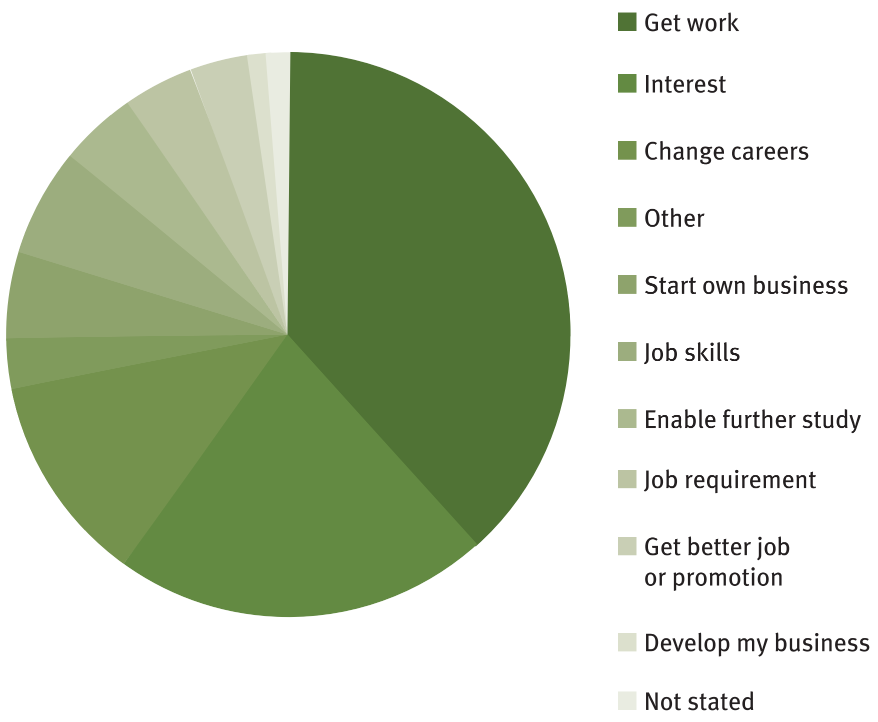
Within the sector, 33 per cent of enrolments were by students with a highest prior qualification of Certificate III or above, compared with 22 per cent across all vocational training (see Figure 4.3).

Figure 4:3: Vocational training enrolments in Information, Media and Telecommunications by highest prior qualification, government subsidised, 2012



The main reasons students were enrolling in vocational training related to Information, Media and Telecommunications were to ‘Get work’ (42 per cent) or ‘Interest’ (17 per cent). ‘Change Careers’ was also important at 7 per cent.

Figure 4:4: Vocational training enrolments in Information, Media and Telecommunications by reason for study, government subsidised, 2012



Appendix: Occupation and course by funding band

Occupation	Course name	Funding band	2011	2012	Q2 2012	Q2 2013
Cabler (Data and Telecommunications)	Certificate II in Data and Voice Communications	Band B	60	60	40	70
	Certificate III in Broadband and Wireless Networks	Band C	<10	<10	<10	<10
	Certificate III in Broadband and Wireless Networks Technology	Band B	<10	80	70	50
	Certificate III in Telecommunications	Band B	160	130	120	50
	Total		220	280	230	170
Electrical or Telecommunications Trades Assistant	Certificate I in ElectroComms Skills	Band C	120	60	80	
	Certificate II in Telecommunications	Band B	40	50	10	<10
	Certificate II in Telecommunications Digital Reception Technology	Band B	<10	<10	<10	
	Certificate II in Telecommunications Technology	Band B	<10			
	Certificate III in Telecommunications Digital Reception Technology	Band B		<10		
	Total		170	120	90	<10
Electronic Engineering Technician	Advanced Diploma of Electronics Engineering	Band C	20	10	<10	<10
	Total		20	10	<10	<10
Graphic Pre-press Trades Worker	Certificate II in Printing and Graphic Arts (Desktop publishing)	Band B	10	10	<10	<10
	Certificate III in Printing and Graphic Arts (Multimedia)	Band B				
	Certificate IV in Printing and Graphic Arts (Multimedia)	Band B	60	60	40	40
	Diploma of Printing and Graphic Arts (Digital Production)	Band C	<10	<10	<10	<10
	Total		80	70	50	40

Occupation	Course name	Funding band	2011	2012	Q2 2012	Q2 2013
Library Assistant	Certificate II in Library-Information Services	Band C	40	30	30	
	Certificate III in Information and Cultural Services	Band B				40
	Certificate III in Library-Information Services	Band B	120	80	70	<10
	Certificate IV in Library, Information and Cultural Services	Band B		<10		120
	Certificate IV in Library-Information Services	Band B	350	280	250	30
	Total		510	390	340	190
Library Technician	Advanced Diploma of Library-Information Services	Band D	100	60	60	<10
	Diploma of Library and Information Services	Band D		10		210
	Diploma of Library-Information Services	Band D	430	380	350	40
	Total		530	450	410	260
Make Up Artist	Certificate IV in Make-up	Band C	60	90	70	60
	Diploma of Specialist Make-up Services	Band D	300	360	330	320
	Total		360	450	400	390
Multimedia Designer	Advanced Diploma of Screen and Media	Band D	250	260	250	230
	Total		250	260	250	230
Performing Arts Technicians nec	Advanced Diploma of Screen	Band D		<10		
	Certificate III in Technical Production	Band C	30	70	60	50
	Certificate IV in Audiovisual Technology	Band B	50	40	40	40
	Certificate IV in Screen and Media	Band C	130	150	130	90
	Diploma of Audiovisual Technology	Band D	40	40	40	40
	Diploma of Costume for Performance	Band C	40	50	40	40
	Diploma of Screen and Media	Band D	180	290	280	230
	Total		460	630	600	490

Occupation	Course name	Funding band	2011	2012	Q2 2012	Q2 2013
Production Assistant (Film, Television, Radio or Stage)	Certificate I in Creative Industries	Band C	-	80	80	<10
	Certificate II in Creative Industries (Media)	Band C	90	130	110	20
	Certificate III in Media	Band C	330	310	220	150
	Total		430	520	410	180
Sound Technician	Advanced Diploma of Sound Production	Band D	120	110	110	160
	Certificate IV in Sound Production	Band C	280	290	280	260
	Diploma of Music Industry (Technical Production)	Band D	20			
	Diploma of Sound Production	Band D	50	70	70	60
	Total		470	470	460	470
Telecommunications Technical Officer or Technologist	Advanced Diploma of Electronics and Communications Engineering	Band A	<10	<10	<10	
	Advanced Diploma of Electronics and Communications Engineering	Band C	190	170	150	100
	Advanced Diploma of Telecommunications Engineering	Band C	30	<10	<10	
	Certificate IV in Telecommunications Computer Systems	Band B	<10			
	Certificate IV in Telecommunications Engineering	Band B	<10			
	Certificate IV in Telecommunications Network Engineering	Band B	20	30	<10	30
	Certificate IV in Telecommunications Networks Technology	Band B		10	<10	<10
	Diploma of Electronics and Communications Engineering	Band C	20	20	10	<10
	Diploma of Telecommunications Engineering	Band C	<10			
	Diploma of Telecommunications Network Engineering	Band C		10	10	10
	Total		260	250	200	150